VSP 516 Series User Manual

RGBlink Science & Technology Co., Ltd.

The pictures and data in the user manual are reference only, check the real product please!

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Revision

Format	Time	ECO#	Description	Principal
1.0	2010-1-15	0000	Release	Lisa
1.1	2010-3-11	0001	Compare table of AVDSP	Lisa
1.2	2010-7-20	0002	1.Add more supported output resolutions; Page:4 2.Add the adjustable feature of DE;Page:11-12 3.Explain the limits of scale; Page:14	Lisa
1.3	2010-8-9	0003	Add prompt to save function	Lisa
1.4	2010-10-22	0004	1.Compared to VSP516 and VSP516H, VSP516S can install SDI input module; 2. VSP516S Baud Rate is 115200, while VSP516 and VSP516H is 9600; 3. The User's Manual add the instruction on how to use USB port to work with console software and LINSN software.	Lisa
1.5	2010-11-4	0005	Add a note about how to use LINSN Software.	Lisa

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1.0 Safety

The general safety information in this summary is for operating person. Any requirement, please feel freely to contact our service engineer.

	Power Source This product is intended to operate from a power source between 85~265 volts rms . This product is only workable under correct power condition, which is already mark on the back panel of the power.
	High Voltage There are many high voltage components inside.
	Do not Remove Covers and Panels Do not remove Covers in any conditions. There are not any spare components inside for maintenance, so do not maintain this product by userrselves, any requirement, please feel free to contact our service engineer. Keep heavy device from power cord.
	Grounding the Product and Use the Proper Fuse This product is grounded through the grounding conductor of the power cord. To Avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals.
	Keep away from Magnet, Motor, TV and Transformer.
	Guard Against Damp Keep using inside clean and dryness environment, once the device get wet, must remove power cord right now.
	Keep away Exploder Do not operate the device inside dangerous and easy explosive gas, which it may make fire, blast or something without expectation.
	Keep away Pour Liquid and Fragment It is forbid to pour liquid, metal fragment or anything else inside this device to avoid fire and other accident. Once that happens, must remove power cord and try to make it clean before power on again.

2.0 Specification

AVDSP series video processors are designed by the latest high performance image processing technology. AVDSP can handle following video without limit, include CVBS（Composite）、S-Video (YC)、YCbCr、YPbPr、RGBHV（VGA）、DVI-D、HDMI、SDI（SD-SDI、HD-SDI） and VOIP（Copper RJ45）.

Compare table of AVDSP as following.

RGBlink AVDSP series video processor compared table									
Parameters		VSP516S	VSP 516H	VSP618	VSP618B	VSP618C	VSP618D	VSP709	VSP 320
Input	COMPOSITE	3x	3x	3x	3x	3x	3x	6x	–
	SVIDEO	1x	1x	1x	1x	1x	1x	2x	–
	SD component YCbCr	1x	1x	1x	1x	1x	1x	2x	–
	SD-SDI	1x	–	–	2x	–	–	–	–
	HD-SDI(SD Compatible)		–	–		–	–	–	–
	DVI	1x	1x	1x	1x	1x	1x	2x	1x
	HDMI	1x	1x	–	–	2x	–	2x	–
	VGA	1x	1x	1x	1x	1x	1x	2x	–
	HD Component YPbPr	1x	1x	1x	1x	1x	1x	2x	–
	Analog Audio	10x	10x	–	–	–	–	2x	–
Output	COMPOSITE	–	–	–	–	–	–	–	–
	SVIDEO	–	–	–	–	–	–	–	–
	SD component YCbCr	–	–	–	–	–	–	–	–
	HD component YPbPr	–	–	–	–	–	–	–	–
	SDI（HD compatible）	–	–	–	–	–	–	1x	–
	VGA	1x	1x	1x	1x	1x	1x	1x	–
	DVI	1x	1x	1x	1x	1x	1x	1x	4x
	HDMI	–	–	–	–	–	1x	1x	–
	Analog Audio	1x	1x	–	–	–	–	1x	–
Function & service	Fade in fade out	–	–	√	√	√	√	√	–
	image processing	10bit	10bit	10bit	10bit	10bit	10bit	10bit	–
	Motion Compensation	nice	nice	good	good	good	good	good	–
	Brightness	√	√	√	√	√	√	√	–
	Gamma	√	√	√	√	√	√	√	–
	Remote control	√	√	√	√	√	√	√	–
	Schedule play	√	√	√	√	√	√	√	–
	Dual display	√	√	√	√	√	√	√	–
	Quad Display	–	–	–	–	–	–	√	–
	Pixel based scale	√	√	√	√	√	√	√	–
	Image shift	–	√	√	√	√	√	√	–
	Subtitle overlay	–	–	√	√	√	√	√	–
	Logo overlay	–	–	√	√	√	√	√	–
	Output Resolution	1280×1024	1920×1080	2048×1152	2048×1152	2048×1152	2048×1152	2048×1152	5760*900;1
	Image refresh frequency	60Hz	60Hz,75Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	50Hz,60Hz, 70Hz,75Hz,85Hz	60Hz
	image exchange	√	√	√	√	√	√	√	–
	image copy	√	√	√	√	√	√	√	–
	Front panel Operation	32key	32key	32key	32key	32key	32key	32key	–
	digital clock	√	√	√	√	√	√	√	–
	control interface	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	USB+RS232+TCP/IP	RS232+TCP/IP	RS232
	control software	√	√	√	√	√	√	√	√
	Standard 1U rack mount	√	√	√	√	√	√	√	√
	Net weight	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	2Kg	1Kg
	CE certification	√	√	√	√	√	√	√	√
	FCC certification	√	√	√	√	√	√	√	√
	RoHS certification	√	√	√	√	√	√	√	√

2.1 Parameters

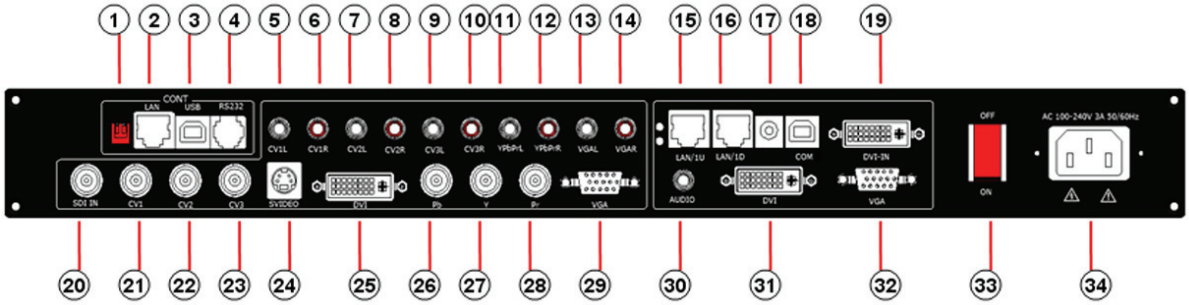
Composite BNC Input	
Number of Inputs	3
Supported Standards	PAL/NTSC; 480i,576i
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75ohm
S-video DIN4 Input	
Number of Inputs	1
Supported Standards	PAL/NTSC; 480i,576i
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm U/V:0.7Vpp±3dB 75ohm
YPbPr BNC Input	
Number of Inputs	BNC*3
Supported Standards	Anologue HD Input 480i,576i,480p,576p,720p50,720i60,1080i50,1080p50 1080i50,1080i60
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm Pb/Pr:0.7Vpp±3dB 75ohm
VGA DB15 Input	
Number of Inputs	1
Connector	Standard DB15 socket
Supported Standards	VGA-UXGA; 1024×768×60, 800×600×60, 640×480×60
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm black level：300mV Sync-tip：0V
DVI Input	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC:1080i50,1080i59.94/60,720p50,720p59.94/60 VESA：800×600×60Hz，1024×768×60Hz，1280×768×60Hz，1280×1024×60Hz，1600×1200×60Hz，1920×1080×60Hz，1920×1080×50Hz
Signal Level	TMDS pwl，single pixel input，165MHz bandwidth
Standard	HDMI 1.3
SDI Input (Optional module）	
Number of Inputs	1
Connector	BNC
Data Rate Range	19.4Mbps~1.5Gbps
Supported Standards	ITU-R BT.656,ITU-R BT.601,SMPTE 259M, SMPTE 292,

	SMPTE 297
Equalization）	Belden 1694A 100M HD1.485G，350m SD 270Mbps
Audio Input	
Number of Inputs	10
Connector	Standard RCA socket
Audio Standard	48Kbps 24bit balance analog audio
DVI Output	
Number of Inputs	1
Connector	Standard DVI-I Interface
Signal Level	TMDS pwl， 165MHz bandwidth
Supported Standards	VESA：800×600×60Hz，800×600×75Hz，1024×768×60Hz，1024×768×75Hz，1280×1024×60Hz，1920×1080P×60Hz
VGA Output	
Number of Inputs	1
Connector	Standard DB15 socket
Supported Standards	VESA：800×600×60Hz，800×600×75Hz，1024×768×60Hz，1024×768×75Hz，1280×1024×60Hz，1920×1080P×60Hz
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB （0.7V Video+0.3v Sync) 75ohm black level：300mV Sync-tip：0V
Audio Output	
Number of Outputs	1
Connector	Standard 1/4” socket
Audio Standard	48Kbps 24bit balance analog audio
Function	
Source Switch	support every signal alpha key operation
PIP	PIP for SD with HD and HD with HD
AV Sync	supported
Extras	
Communication	RS232 USB TCP/IP
Power Supply	85-264V 2A IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	1 year

Note:	VSP 516H is different from VSP 516 as following output resolution.
	800×600×75Hz，1024×768×75Hz，1280×768×60Hz
	1920×1080p×60Hz
Specifications are subject to change without notice.	

3.0 Connection

3.1 VSP 516 Back Panel



1、Dial the code switch；

2、10/100M interface (copper RJ45). Used to connect the computer by 568B-568A twist-pair;

3、USB interface，Used to connect the computer；

4、RS232 interface (RJ11) for AVDSP processor. Used to connect the computer;

5-14、Audio interface, support audio signals from DVD player or audio sources;

15-16、Gigabit copper port, connect to LED screen;

17、Gigabit Transmitter card power interface, not use inside case;

18、Gigabit Transmitter card USB control interface.

19、Gigabit Transmitter card DVI input，connect to DVI output of VSP 516.
（This Connection does not support hot-plugging）

20、SDI Input BNC, used to support SD/HD SDI input。Input the video signal from the HD player, HD projector. (SDI input is the optional module)

Note:	VSP 516S can install a SDI input module to support SD-SDI and HD-SDI signal, compared to VSP 516 and VSP 516H.

21-23、Composite input interface，Composite BNC. Used to input composite signal （PAL, NTSC, SECAM compatible）;

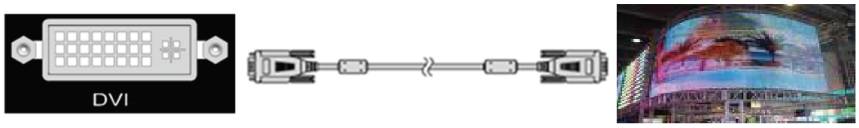
24、S-Video DIN 4, used to input S-Video signal（PAL, NTSC, SECAM compatible）;

25、DVI input interface。Input the video signal from computer, DVI signal generator. Connect to the same DVI interface on VSP 516;
（This Connection does not support hot-plugging）

26-28、R/Pr G/Y B/Pb BNC, used to support SD/HD analog video input, up to 1080p60;

29、VGA input interface, DB-15, used to support Analog RGB input; Connect to the VGA interface on the VSP processor.

30、AUDIO output interface2，connect to the audio player。
31、DVI output interface，connect to the monitor or LED screen which has DVI interface.（This Connection does not support hot-plugging）

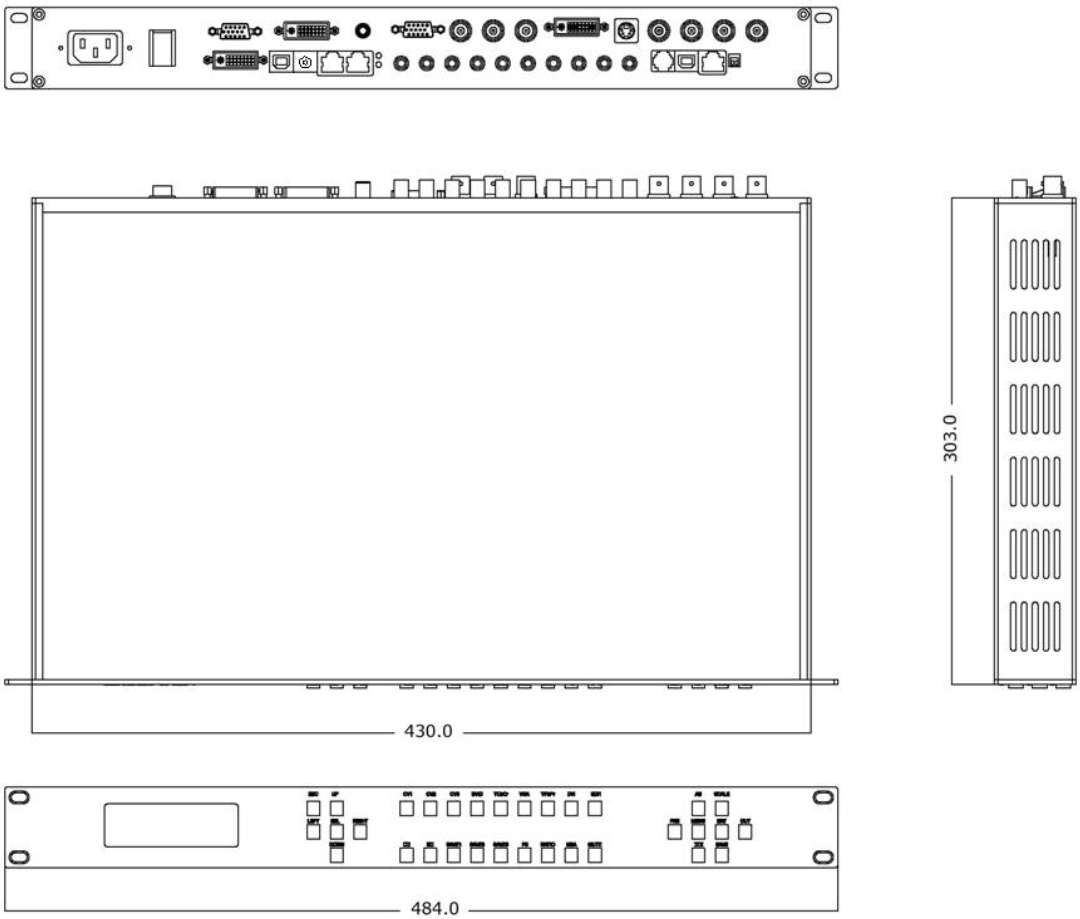


32、VGA output interface, connect to the monitor, projector and so on;

33-34、Switch and power. It must use IEC-3 power line. Always ground to avoid electric shock.

3.2 How to install

VSP 516 frame size



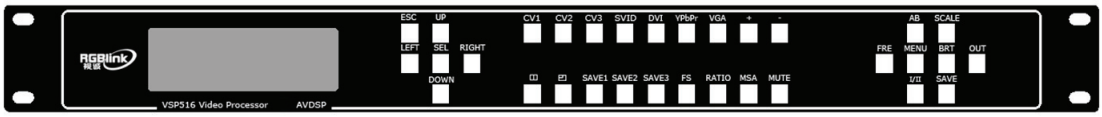
Note:	VSP 516S has the same frame size of VSP 516H and VSP 516S;

4.0 Front Panel Keyboard Operation

Insert power cord and push power to ON position. LCD module on the front panel will show RGBLINK and go into self verification before it load last setting config and send processed image to the target monitor. For the first setup, CV1 input is default source. With front panel keyboard, user can operate VSP with menu display on LCD module.

4.1 VSP 516 series Operator Guideline

VSP 516 series front panel as following：



1. LCD Module;

2. Keyboard:

ESC: push to exit from current choice item;

SEL: push to confirm the current choice item;

UP: push to select up items in LCD menu;

DOWN: push to select down in LCD menu;

LEFT：push to select the left items

RIGHT：push to select the right items

CV1：switch to composite 1 input

CV2：switch to composite 2 input；

CV3：switch to composite 3 input；

SVID：switch to SVideo；

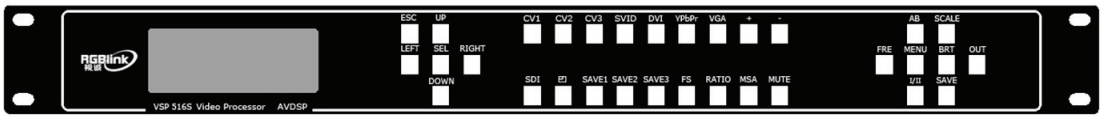
VGA: switch to analog RGB input；

YPbPr: switch to high definition component，

DVI: Switch to DVI input

+:Switch to amplify the audio;

-:Switch to down scale the audio;



SDI: SDI input, compatible with HD/SD SDI, push to switch to SDI input;

Note:	VSP 516S can install a SDI input module to support SD-SDI and HD-SDI signal, compared to VSP 516 and VSP 516H.

PBP: Switch to show two pictures in side by side mode;

Note:	VSP516S front panel remove PBP mode button to SDI button; VSP516 and VSP516H front panel keep PBP mode button, but remove SDI button.

PIP:Switch to show picture in picture on the screen. CV1 is the default small picture on the top left corner, DVI is the default picture with full screen.

SAVE1：switch to use the user-defined mode 1;

SAVE2：switch to use the user-defined mode 2;

SAVE3：switch to use the user-defined mode 3;

FS：switch to selet full screen or zoom view, just for single picture mode;

RATIO：switch to select aspect ratio 4：3 or 16：9;

MSA：switch to select the audio channel which send to output in multi picture mode;

MUTE：Switch to select mute sound or return;

MENU:push to go to main menu;

FRE:push to freeze the video image or live again;（Freeze→Live→Freeze）

AB: Channel Switch, only works under the PBP mode. Push it to switch between the picture of main channel and the picture of subchannel. For instance, if processor now works under subchannel mode, user can switch channels in subchannel; be under subchannel mode if you push Reset button.

Note:	AB in VSP 516 doesn't support Fade-In-Out.

SCALE: push to go to between scale→zoom→crop→scale mode；

BRT：push to adjust the brightness and the contrast ratio, push to enter to the relevant Menu, and then push the UP and DOWN to adjust the brightness and the contrast ratio.

OUT: push to select the output format by using the UP and DOWN.

I/II: push to set single or dual channel

SAVE: push to save current config.

4.2 Video Processor Menu

System menu as follows;

Fig. 1

The first line shows VSP 516.

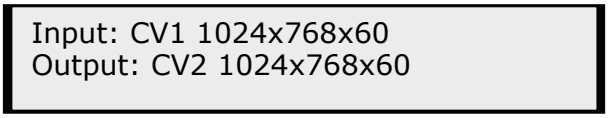
Push the right and left direction key to select the left or right menu. Before the menu item, if there is a * sign, means the menu item has been selected, you can push the Select key to enter it.

The ↑ on the right means you can select the menu items by pushing the up and down direction key.

User can check the information of the equipment in "Dev Info" menu (including the manufacturer、serial-number);

User can get more service and support according to the serial-number.

User can check current input and output sources in Dev Info menu also.



Touch UP/DOWN to check customer service E-mail and web site address; User can visit company web site for more product information.

Touch UP/DOWN to check System time

User can do a Factory Settings in Recall menu, after successful reset you will see the menu as follows:

```
Factory reset was completed !
```

Push the MENU to enter the main menu, then push up and down direction key, the menu as follows:

```
>VSP 516
*Language              Alpha      ↑
```

Push the LEFT/RIGHT to select the relevant submenu.

LANGUAGE submenu as follows：

```
*LANGUAGE
>Chinese               English
```

Push UP/DWON to enter Alpha setup, user can set value from 0 to 100, 0 means video or graphic would be disappear and 100 means normal;

Port A and Port B stand for two channel picture;

```
*Alpha
Port A Value：         100
```

Push OUT to enter the Output menu, push the UP or DOWN to select different output resolution, push OK to confirm the output resolution.

Advance submenu as follows：

Note:	① VSP516H and VSP 516S support the minus pixel shift function, which VSP 516 can not support;
	② VSP516H and VSP 516S can not support pixel shift on the resolution 1920×1080P×60Hz.

Pixel shift to minus:

Press UP/DOWN and select the menu as shown in Figure 1:

```
>VSP 516
*Advance                    XY_Pos  ↑
```

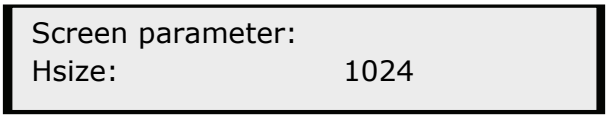
Figure 1

Press LEFT/RIGHT and select XY_Pos to enter the submenu of adjusting effective area;

XY_Pos：The sub-menu of which is used to adjust the position of overall effective area shown on the screen or monitor.

H_BLANK: The overall effective area can be moved around by adjusting the value of H_BLANK.

V_BLANK: The overall effective area can be moved up and down by adjusting the value of V_BLANK.



Step：user can set the step of scale;

HSize：set the horizontal size of the image;

VSize：set the vertical size of the image;

HPos：set the horizontal position of the image;

VPos：set the vertical position of the image;

User can set size and position of the screen simply, Mainly applies to LED screens users. After setting screen parameter， the user choice PIP or PBP operation, display picture can directly shows on corresponding screen。

Push the Ⅰ/Ⅱ to enter Single or Dual channel menu , push the UP / DOWN to select the single or dual channel, push SEL to confirm the single channel or dual channel work state;

Select the input channel, push the UP/DOWN, and SEL to confirm the

different input channel. User can also push the channel name on the keyboard to go into the input channel.

AB in VSP 516 is used to enable channel if dual channel mode.

OR：

Push SCALE to set the size and position of the image, push UP/DOWN and SEL to confirm the relevant items;

Step：user can set the step of scale;

HSize：set the horizontal size of the image;

VSize：set the vertical size of the image;

HPos：set the horizontal position of the image;

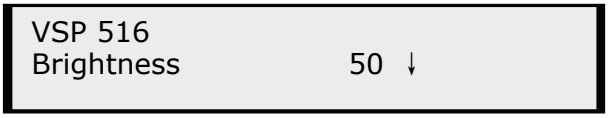
VPos：set the vertical position of the image；

Note:	When shown in one single image, the ratio between the horizontal and the vertical of the image should be equal to or less than 3.
	When shown in dual image, there is a limit of aspect ratio of the image in the left side: The horizontal of the image in the left side should be larger than that of the image in the right side. This rule still need to be followed even if the images are dragged to the opposite.

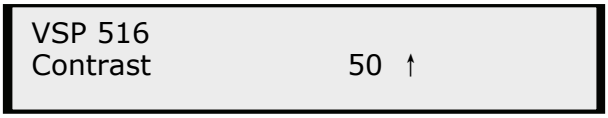
Push the FRE to freeze the live image or live the freeze image.

OR：

Push BRT to set the brightness and the contrast ratio:



OR：



Push SAVE and then push SAVE1 or SAVE2 to save the operation to SAVE1 or SAVE2;Push SAVE1 or SAVE2 to execute relative operation after user save the operation sucessfully.

Note:	Add prompt to save function
	For VSP 516 series, when user push the SAVE key, the SAVE1、SAVE2 and SAVE3 lights on the front panel will go on at the same time, it reminds user must press SAVE1 or SAVE 2 to finish the final save function.

Touch FS button can realize screen switch between scale mode and full screen mode.

Touch RATIO button，set screen width and height.

MSA： touch the main sub-channel audio and audio channel switching button,main channel will play sound.

Touch again, sub-channel will play sound.

MUTE：mute the equipment, shown as the picture:

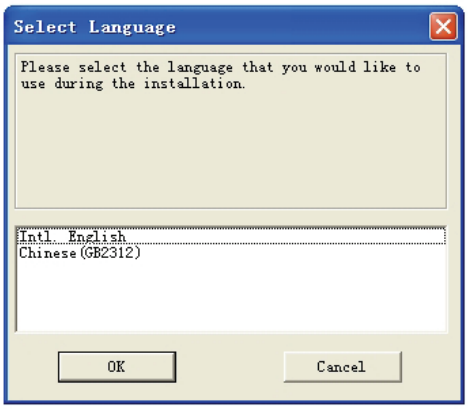
Touch MUTE again will revovery to play sound.

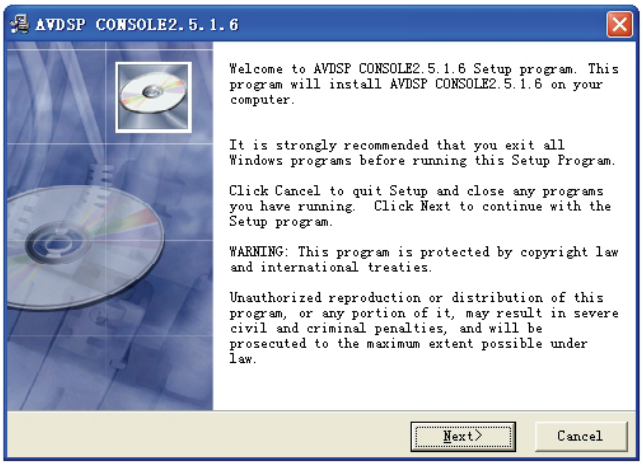
5.0 Communication Software Guideline

AVDSP video processor is very easy to be configured with user friendly communication software, support drag and drop operation for edit and display. Also can customized with schedule function.

5.1 Install Software

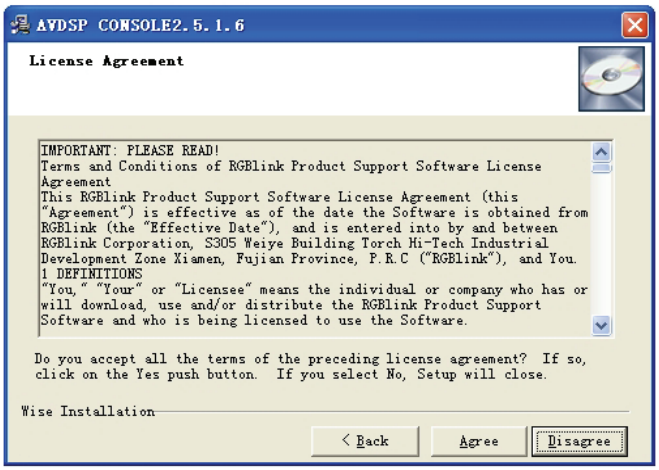
Dual click AVDSP.exe to install, select Chinese or English version for use, after click “select ” to next dialog.

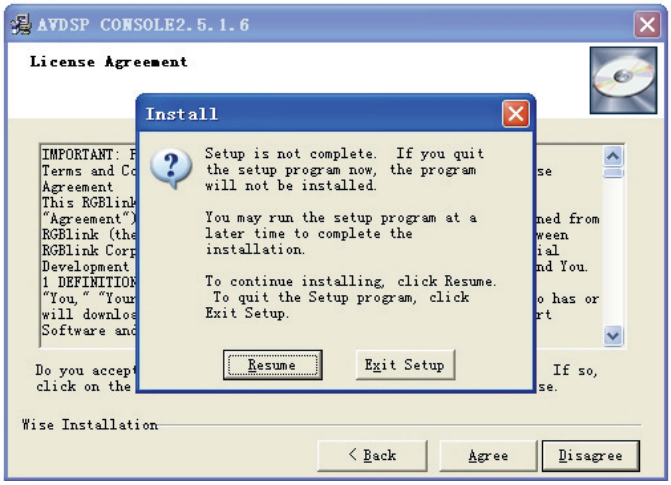



AVDSP CONSOLE2.5.1.6
Welcome to AVDSP CONSOLE2.5.1.6 Setup program. This program will install AVDSP CONSOLE2.5.1.6 on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup Program.
Click Cancel to quit Setup and close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next>
Cancel

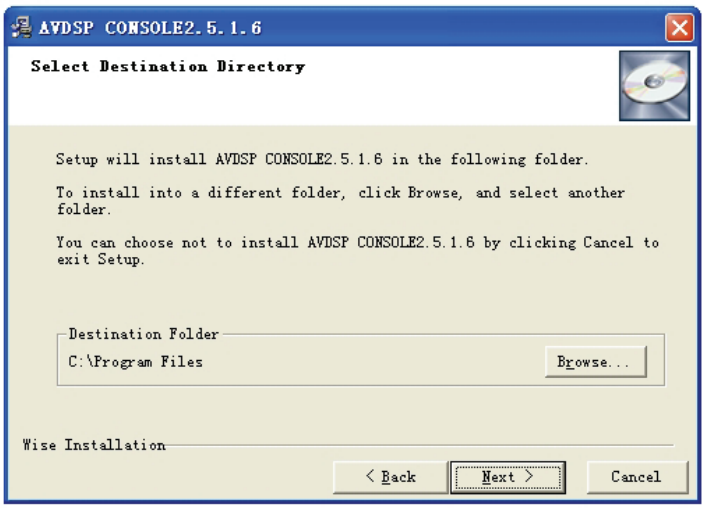
If user agree to install this software, please click next to go on, else click esc to exit this install.

And in next dialog is the user agreement of the software, click agree to go on and refuse to exit.

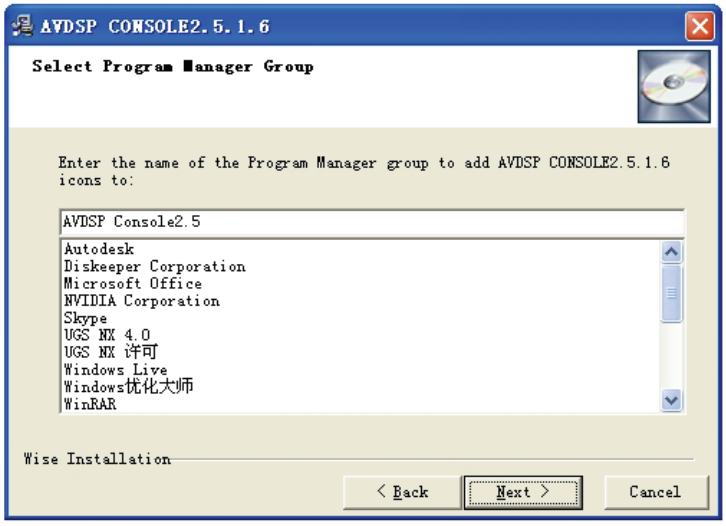

AVDSP CONSOLE2.5.1.6
License Agreement
IMPORTANT: PLEASE READ!
Terms and Conditions of RGBlink Product Support Software License Agreement
This RGBlink Product Support Software License Agreement (this "Agreement") is effective as of the date the Software is obtained from RGBlink (the "Effective Date"), and is entered into by and between RGBlink Corporation, S305 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C ("RGBlink"), and You.
1 DEFINITIONS
"You," "Your" or "Licensee" means the individual or company who has or will download, use and/or distribute the RGBlink Product Support Software and who is being licensed to use the Software.
Do you accept all the terms of the preceding license agreement? If so, click on the Yes push button. If you select No, Setup will close.
Wise Installation
< Back
Agree
Disagree


AVDSP CONSOLE2.5.1.6
License Agreement
Install
Setup is not complete. If you quit the setup program now, the program will not be installed.
You may run the setup program at a later time to complete the installation.
To continue installing, click Resume. To quit the Setup program, click Exit Setup.
Resume
Exit Setup
Wise Installation
< Back
Agree
Disagree

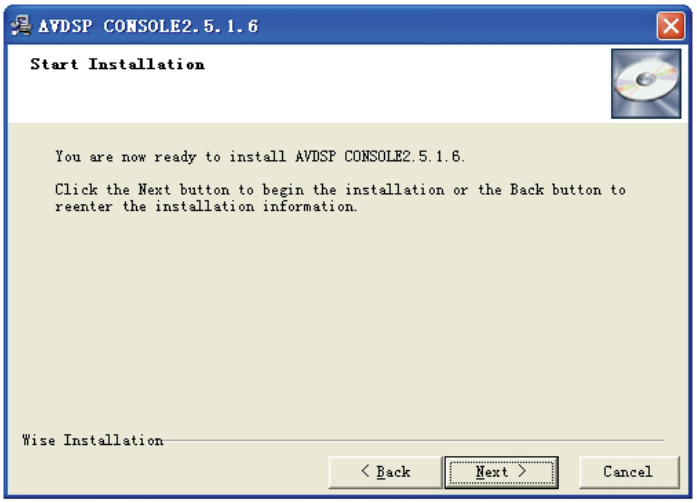
If users agree to the agreement, user can select install directory in next dialog, else, click next to install software to default directory "C:\Program Files".

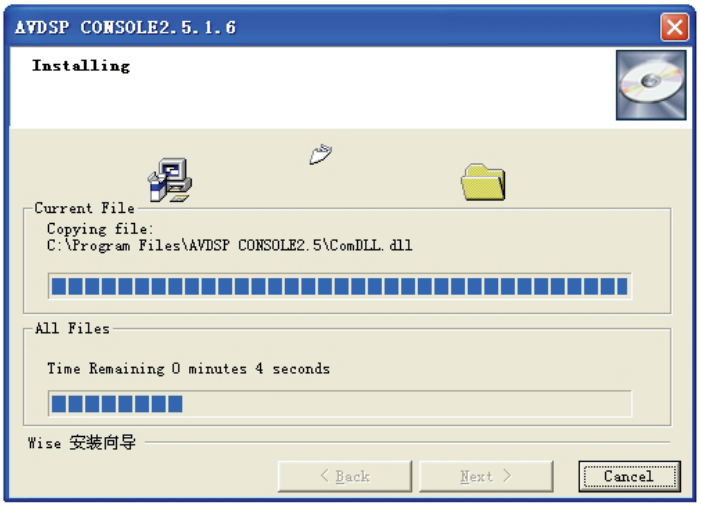

AVDSP CONSOLE2.5.1.6
Select Destination Directory
Setup will install AVDSP CONSOLE2.5.1.6 in the following folder.
To install into a different folder, click Browse, and select another folder.
You can choose not to install AVDSP CONSOLE2.5.1.6 by clicking Cancel to exit Setup.
Destination Folder
C:\Program Files
Browse...
Wise Installation
< Back
Next >
Cancel

Click "next " to go on.

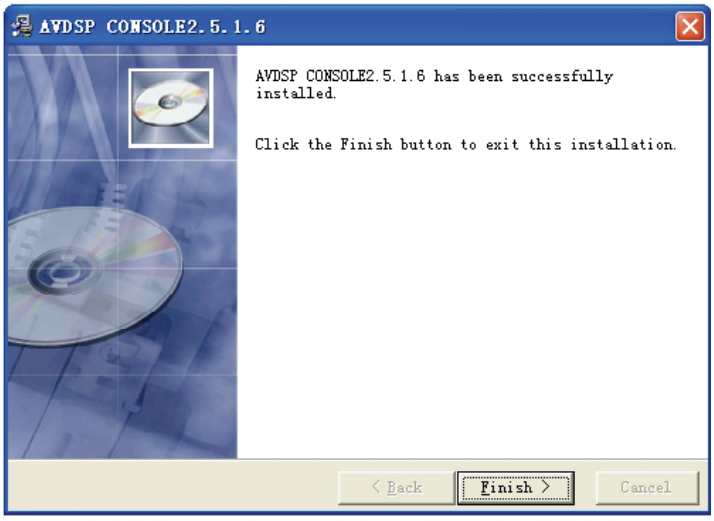


Click “next ” to go on.


AVDSP CONSOLE2.5.1.6
Start Installation
You are now ready to install AVDSP CONSOLE2.5.1.6.
Click the Next button to begin the installation or the Back button to reenter the installation information.
Wise Installation
< Back
Next >
Cancel

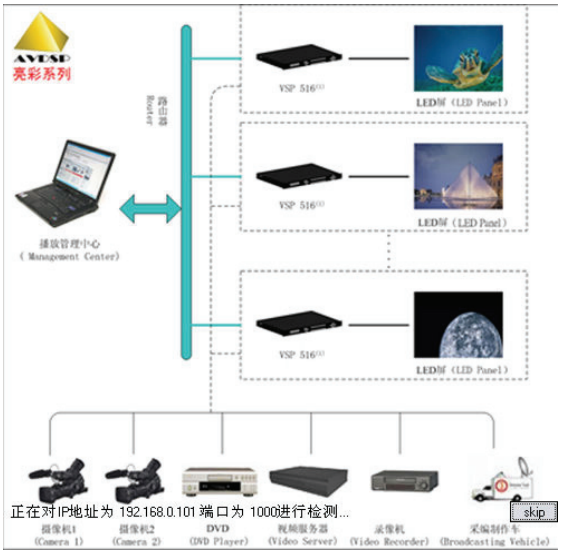


Click “finish” and ready to run AVDSP console.

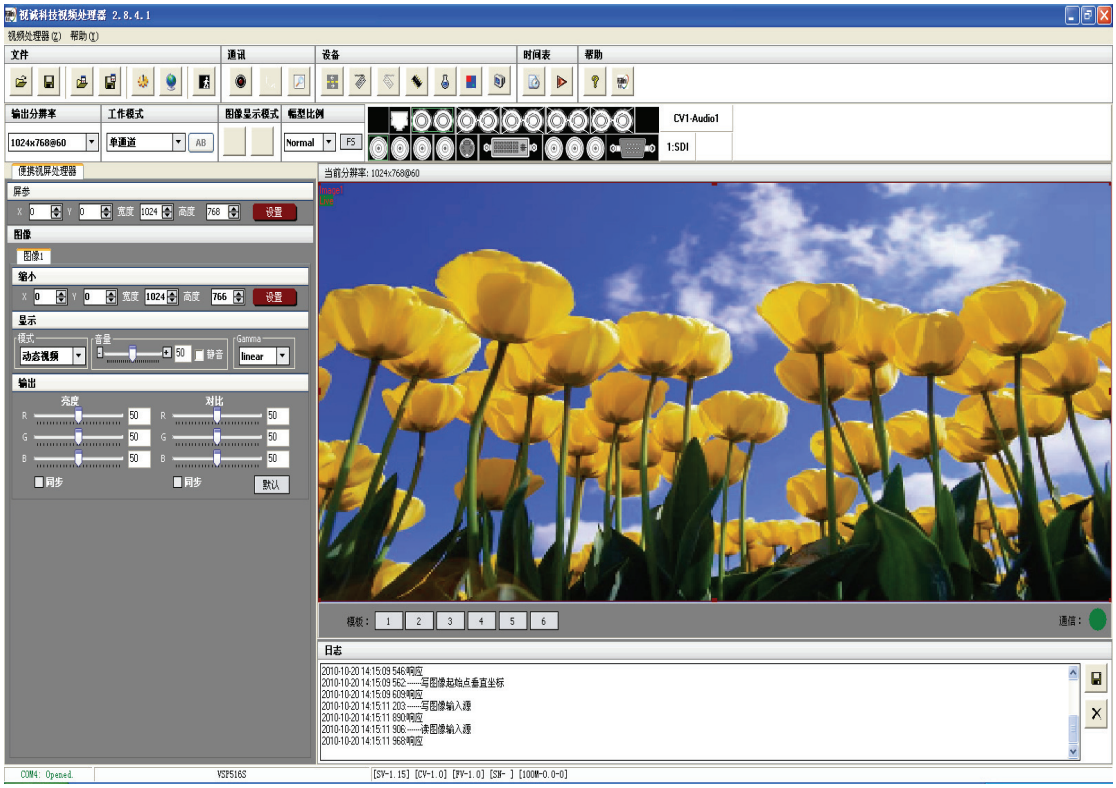

AVDSP CONSOLE2.5.1.6
AVDSP CONSOLE2.5.1.6 has been successfully installed.
Click the Finish button to exit this installation.
< Back
Finish >
Cancel

5.2 Run AVDSP Console

Run AVDSP.exe and the console will auto detect device in serial or networks by detected Comm port and pro-define IP address.



After detect, open the device console, for example, if the device is VSP 618, then VSP 618 console will be load, as following. Default loading is VSP 516 if can not detect any device.



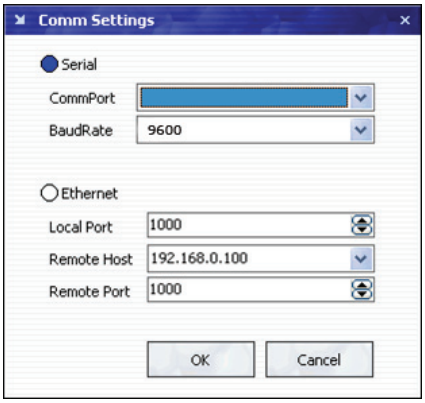
Setup Communication

AVDSP Console support COM port or Ethernet (UDP) to access AVDSP.For the first running ,user must click the to close COM Port. Click to change the COM Port and the Baudrate.

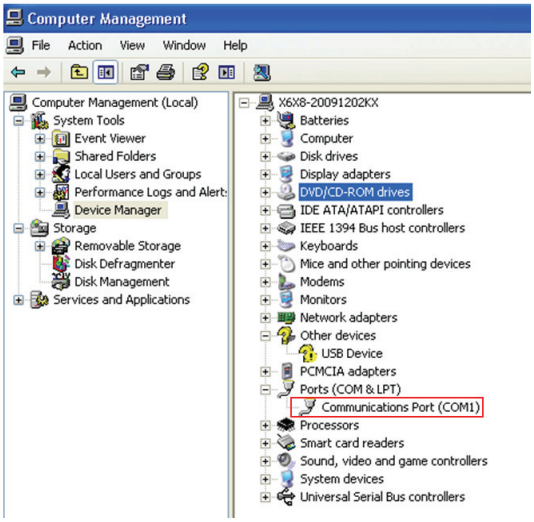
Serial: user can make choice between existent com ports and baud rates; default Baudrate is 9600.

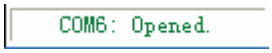
Ethernet: user can fill any number less than 1023 in Local Port. The Remote Port must be 192.168.0.100 and the Remote Port must be 1000.

Note:	VSP516 and VSP516H work Baud Rate as 9600, while VSP516S Baud Rate works as 115200.



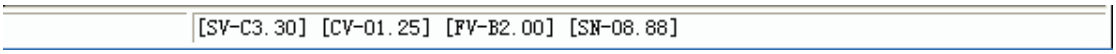
The COM Port is decided by user's COM. Right click my computer icon on desktop, select Hardware→Device Manager in the system attributes dialog. The COM in red in the picture is the COM user can make choice.



Then click to open COM. 

will display after success to connect the COM.

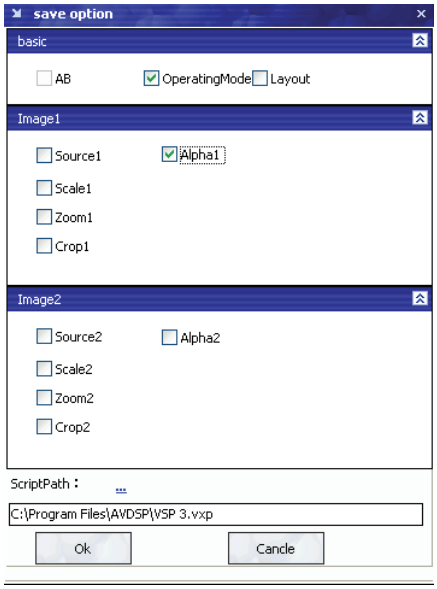
If AVDSP console success to detect device in chain, the software version, device core version, firmware version and serial number will display on the bottom right corner of the screen.



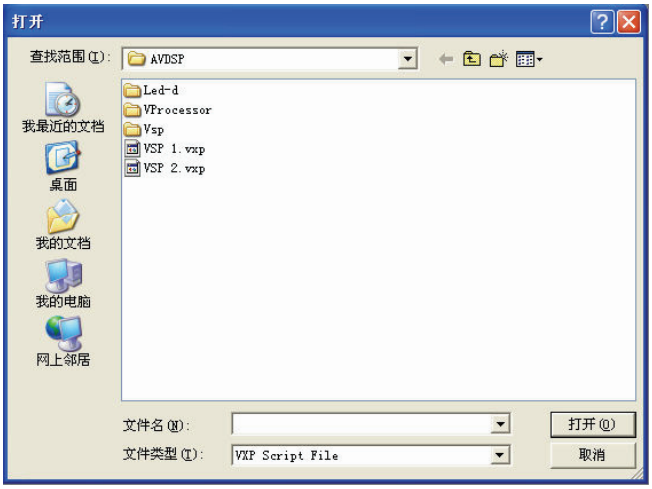
5 How to use

Operator can check parameters by software.

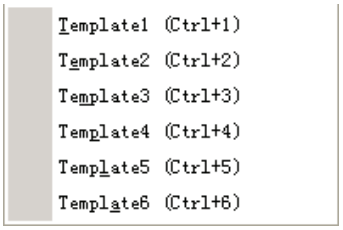
: Save script. Save current user config parameters as script.



: Open script. User can open saved script.



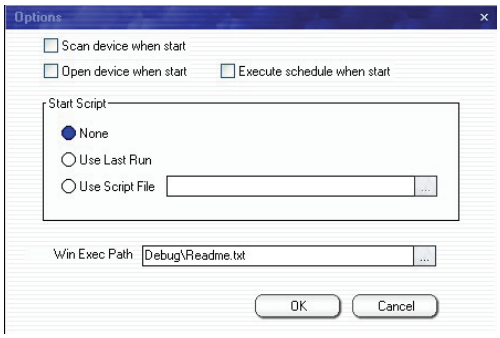
: Import template. There are six templates for user.



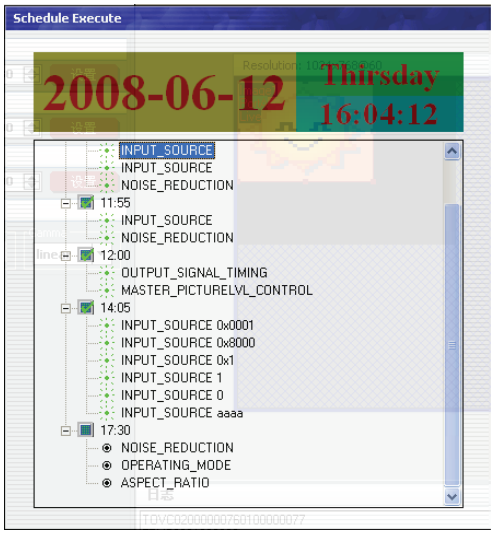
: Export template. Export current config as template.

: Option. User can choose open device when start and using script saved before or execute schedule edited before when start.

If user choose open device when start, user can use last run, use script file or none when user start. User can click to choose which script user want to open.



If user choose execute schedule when start, the next dialogue will display when software run.



: Language. The software supports Chinese and English version. The picture following is the Chinese dialogue.

: Exit.

Communication

: Open COM.

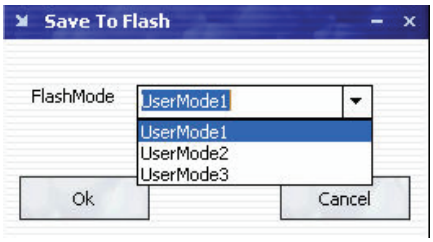
: Close COM.

: Set COM.

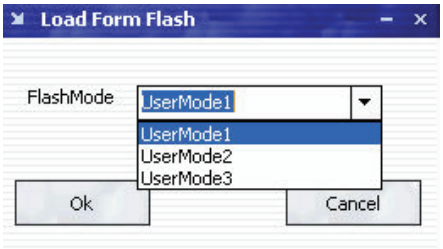
Device

: Synchronization.

: Save to flash.



: Load form Flash.



Load user config from flash.

: Factory setup

: Advance, for adm. inistrator control.

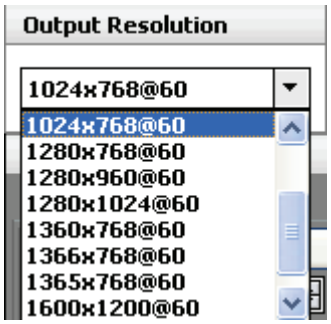
: Execute schedule or stop schedule.

Help

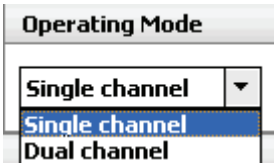
: Help. Display helps dialogue.

: About.

Output resolution: user can choose different output resolution by selecting from pull down list.



Operating mode: choose to work in single channel or dual channel.



Layout: if in dual channel mode, user can set the device to work in PIP or PBP mode directly with quick preset layout button as following.

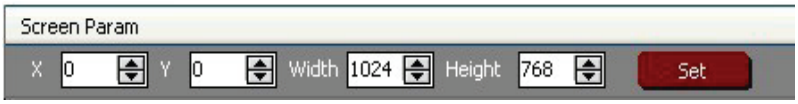
Input: the white area display the name of input interface when the mouse is over the interface picture on the left. The orange pane means current selected interface.

If work in dual channel, channel 1 includes VOIP, CV1, CV2, CV3, SVideo, YCbCr, SDI 1 and SDI 2, and channel 2 includes DVI, YPbPr, VGA, HDMI1 and HDMI 2. The cross over interface picture means they can not access. The orange pane

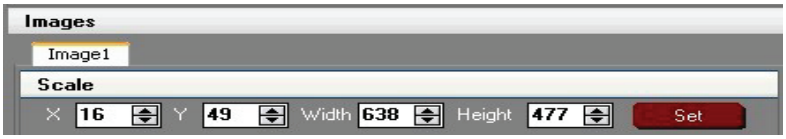
means selected interface for channel 1. The blue pane means selected interface for channel 2.

Screen parameter:

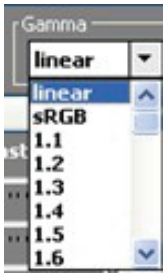
User can set size and position of the screen simply, Mainly applies to LED screens users. After setting screen parameter， the user choice PIP or PBP operation, display picture can directly shows on corresponding screen。



Images: User can scale the images；image 2 can't choose in single channel mode.



Display Toolbar：

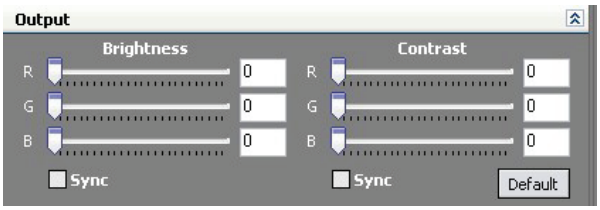


Display toolbar Users can set Alpha value of "dynamic Video" and "static current frame" through display toolbar.

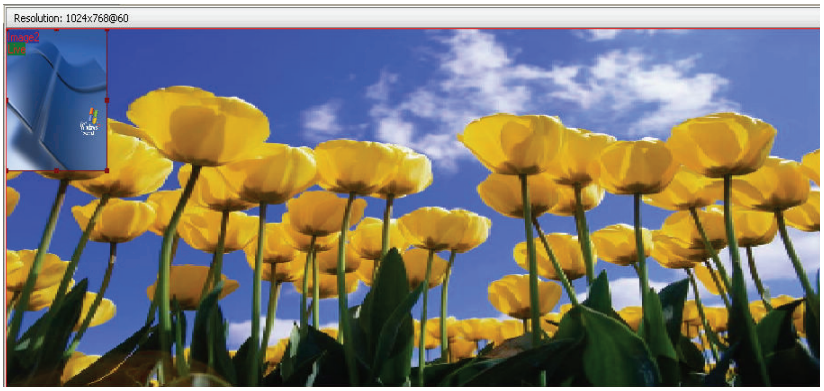
Setting Gamma is generally not recommended, since LED large screen itself has Gamma function.

For further information, users can contact with our customer service team.

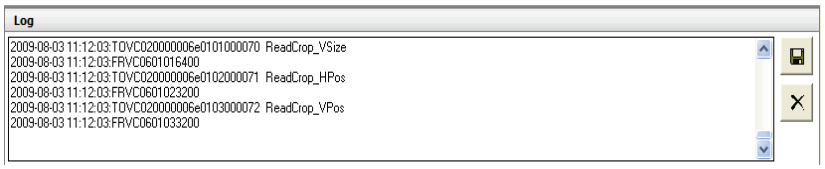
Output: user can customize the brightness and the contrast.



Display: user can customize image or images position and size just by drag and drop image (images) in this area. This process is sync to the parameters in images toolbars.



Log: user can save or delete the operate log file.

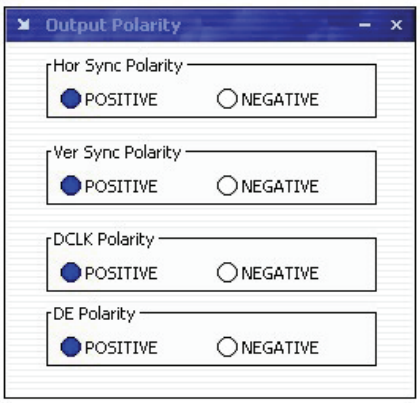


Added functions

- **Output polarity**

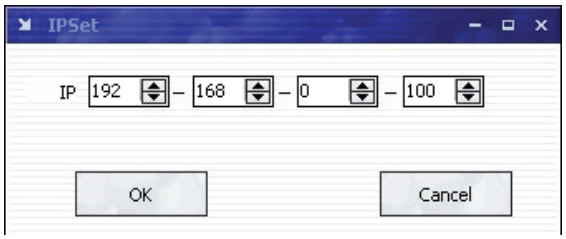
Normally, the polarity will set to be positive.

If the Horizontal and vertical polarity of VSP 516 equipment is different from Tx, the polarity should be negative, or else it can not send data to the LED screen correctly.



- **IP set**

Users can set equipment IP, Usually used under the condition of one computer control or remote control several computers.



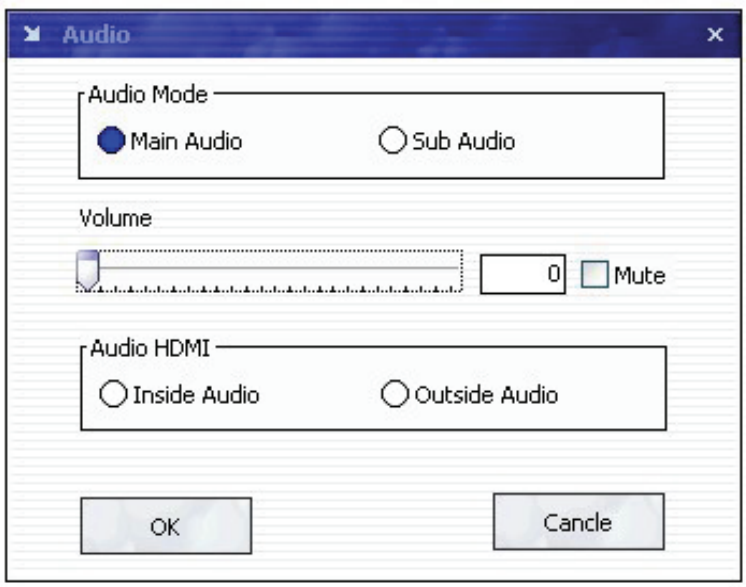
- **Sound**

If worked under the dual-screen mode, users can select main screen sound or sub-picture sound by clicking option box.

HDMI can transmit audio and video signals at the same time on one data line.

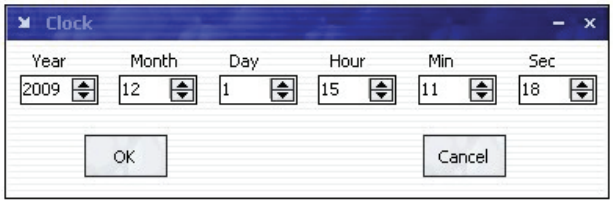
If users choose HDMI signal source with sound, users should choose “embedded audio”;

If users choose HDMI signal source without sound, users can broadcast sound through External speaker and choose” HDMI outside embedded audio”.



- **Clock**

Users can set or adjust lower computer time through" clock"

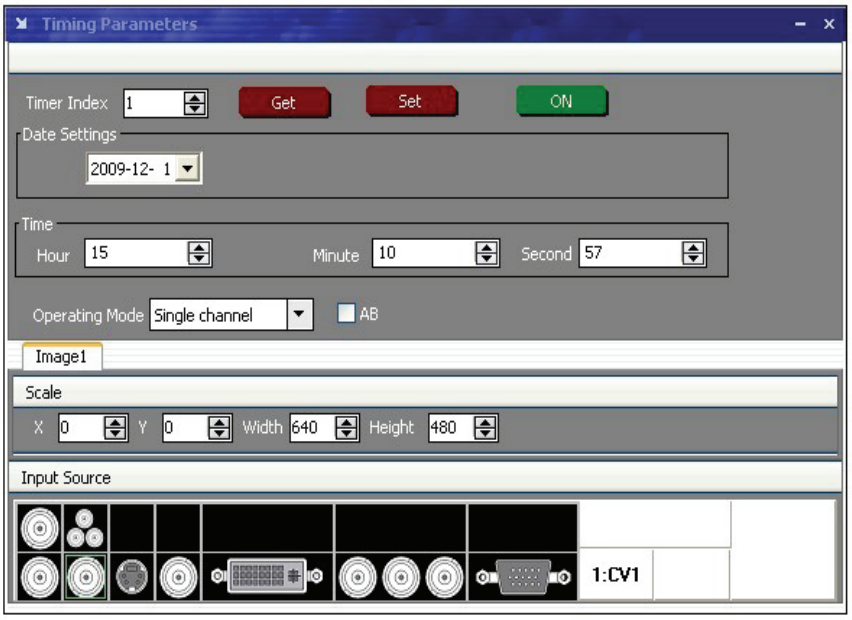


- **Equipment Schedule function**

Users can set device to work with schedule, and then device can automatically switch between single or dual channel, resize image, switch video and with fade effect in need.

Equipment currently supports max 10 regular content; users can set in the "timing" option.

Specifically how to implement devising schedule function, please refer to Appendix II.



6.0 FAQ

6.1 No output in target display

1) Check the output config of the input video.

2) Check the input channel config is ok. Ex.The composite 1 interface is connected to the composite interface of video source.

3) Check the connection of output is ok.

4) Check the target monitor or display is not destroied or power down.

5）Check the output resolution of AVDSP is not out of the maximal resolution of target display.

6) Check ALPHA value is not 0.

7）Any requirement, please feel free to contact our customer service engineer.

6.2 VGA input could not work with AVDSP Console

1）Check VGA source output is ok.

2）Check VGA input resolution is not out of AVDSP Console support list, as following. The biggest input resolution is 1024*768*60Hz

3) Check AVDSP Console works in VGA input mode.

4) Any requirement, please feel free to contact our customer service engineer.

6.3 DVI input could not work with AVDSP

1) Check DVI source is ok.

2) Check DVI source output is not out of AVDSP support list.

3) Check AVDSP works in DVI input mode.

4) Check the connection between AVDSP and DVI source is correct. Restart DVI source and check output.

5) Any requirement, please feel free to contact our customer service engineer.

6.4 Component input could not work with AVDSP

1) Check the connection between AVDSP and Component source is correct. Especially Y signal. Refer to cabling example in page 5. High Definition component YPbPr is only support in YPbPr input。Standard definition YCbCr support 480i and 576i only; High Definition YPbPr support 480i、576i、480P、576P、720P50、720P60、1080i50 and 1080i60;

2) Check component source works, normally DVD component output should be open from its menu.

3) No recommend to output component and SVideo input from the same source.

4) Any requirement, please feel free to contact our customer service engineer.

6.5 User settings can not save

VSP 516 supports multi config mode.For multi config mode, the equipment starts to work automatically with the SAVE1 mode.According to different equipments,you can solve the problems that modes can't be saved by the following steps.

VSP 516

Confirm to press the "SAVE" button,then press "SAVE1",or "SAVE2",or "SAVE3",that will save the current operation mode to the "user mode 1","user mode 2" or "user mode 3"; After that, push button "SAVE1",""SAVE2,"SAVE3",it wil call out the corresponding set -ting of user-mode.if that,the saving is successful.
Ater saving process, user should not do factory reset or any saving operation to user mode 1, otherwise, "SAVE1" will be over write.

6.6 Can't update main board software

Connect the computer and AVDSP Series, select *.mot. Download file to device. After the equipment power up, right-click the ".mot" file at the left side of menu, when the screen shows "waiting for update", you can update the main board program. Next, choose the "download file to device", start to loading.

7.0 Quick Start

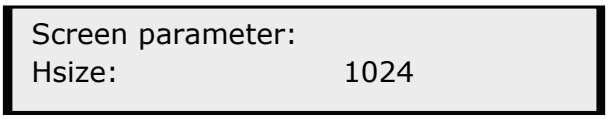
7.1 Single-screen control

Set screen parameters

Users can easily change the screen size and location by setting the parameters with keyboard and LCD menu.

Press MENU to access main menu, Menu shows as below picture：

Press UP / DOWN button to turn the menu shown as below pictures：



Step： Set the unit of zoom and move every time；

HSize：Set Horizontal size；

VSize：Set vertical size；

Hpos：Set horizontal coordinates(horizontal phase)；

VPos：Set vertical size(vertical phase)；

Scale pictures

Step：Set the unit of scale and move every time;

(Three steps available:1, 10,100)

HSize：Set horizontal size;

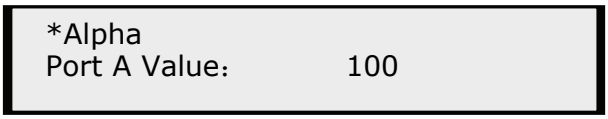
VSize：Set vertical size;

HPos：Set horizontal coordinates(horizontal phase)；

VPos：Set vertical size(vertical phase)；

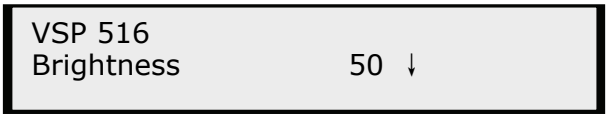
Set alpha

Enter Alpha sub-menu can set the alpha of video, Press UP /DOWN to set the value of alpha; Port A and Port B represent two video channels;

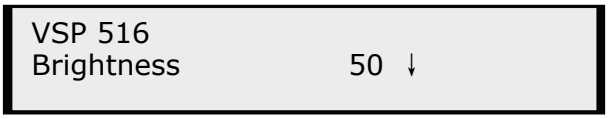


Set brightness contrast

BRT brightness and contrast button can set brightness and contrast of active window video shown as below pictures:



BRT brightness and contrast button can set brightness and contrast of active window video shown as below pictures:



Freeze Frame

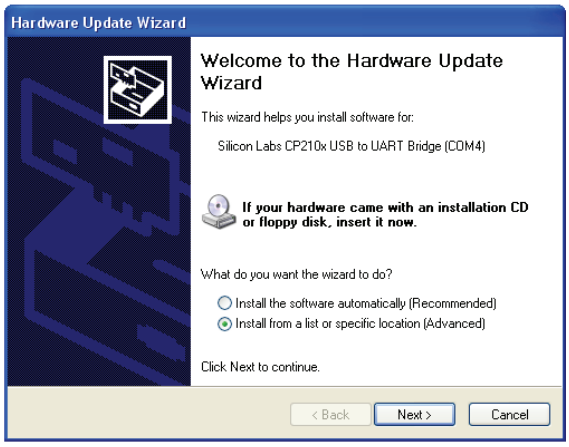
Press FRE static frame button can freeze, press the button can freeze current active window image; You can make the screen switch between static and active with this button; Pictures show as below:

or

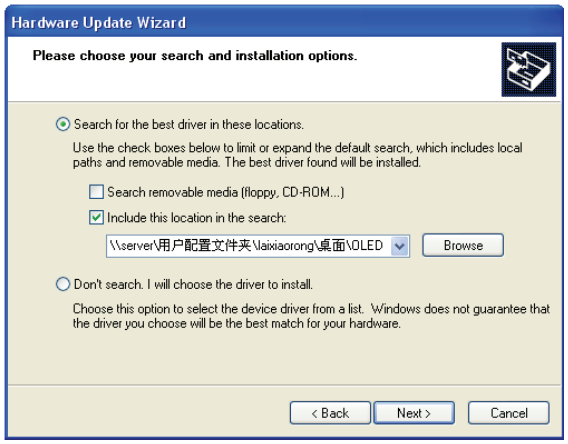
7.2 How to control processor with console software by USB?

1. Install the driver;

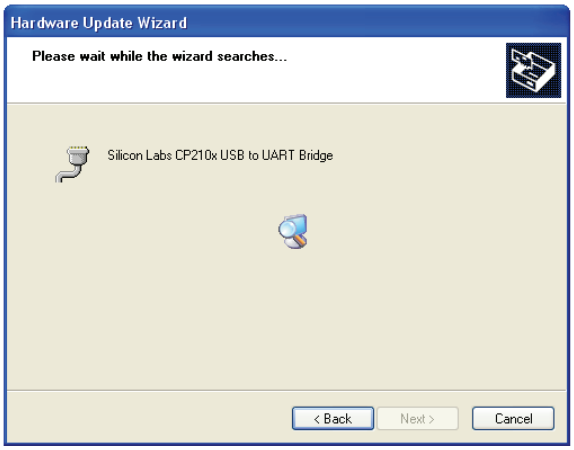
Connect the USB cable to the PC and the video processor. Turn on the VSP516S, for the first time to use USB, the PC will remind finding the new hardware and ask to install the driver for this new driver.

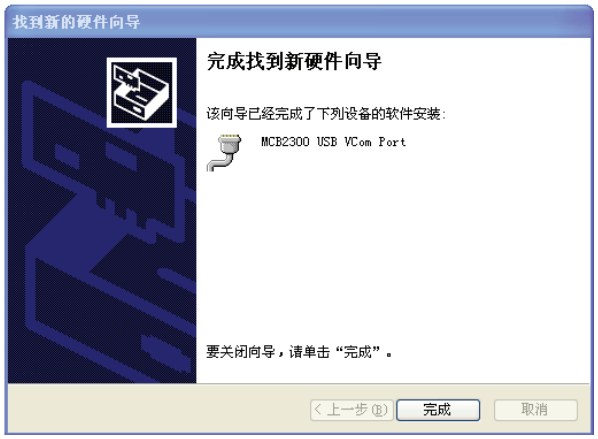

Hardware Update Wizard
Welcome to the Hardware Update Wizard
This wizard helps you install software for:
Silicon Labs CP210x USB to UART Bridge (COM4)
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Install from the list or specified location, press "NEXT":

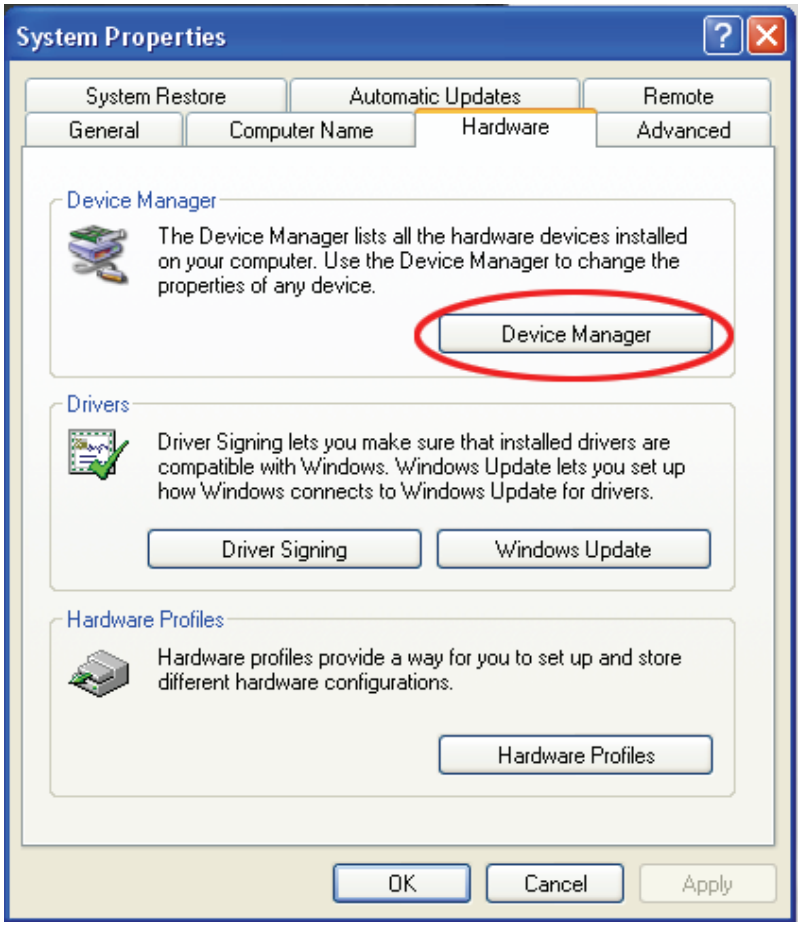

Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
\\server\用户配置文件夹\laixiaorong\桌面\OLED
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

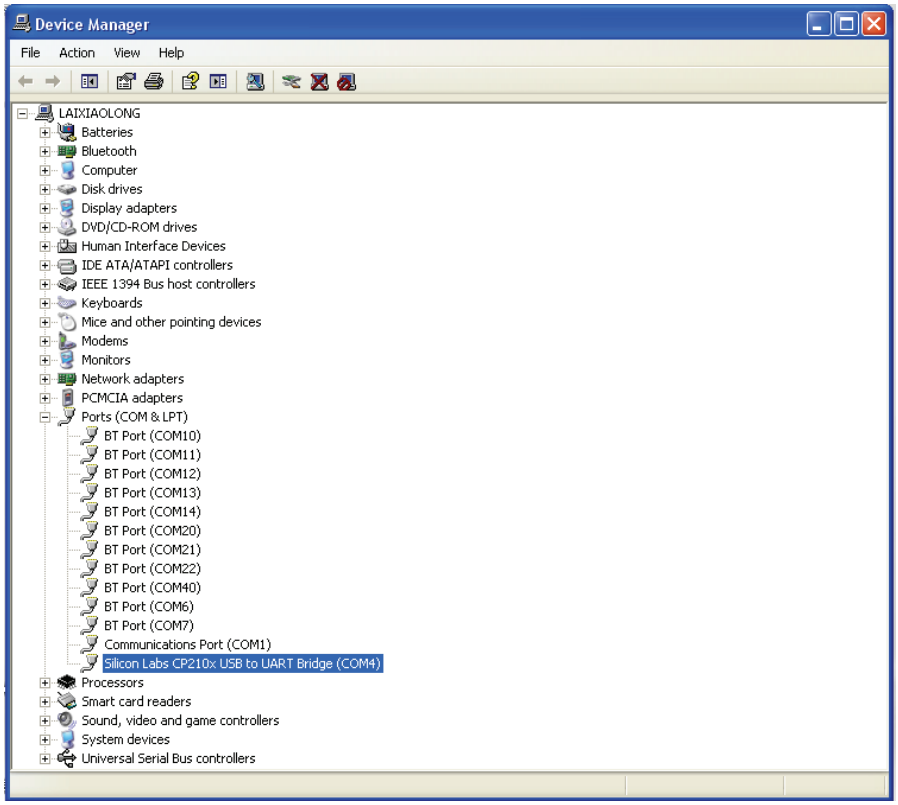
Press " browser" to find the driver, and press "NEXT"



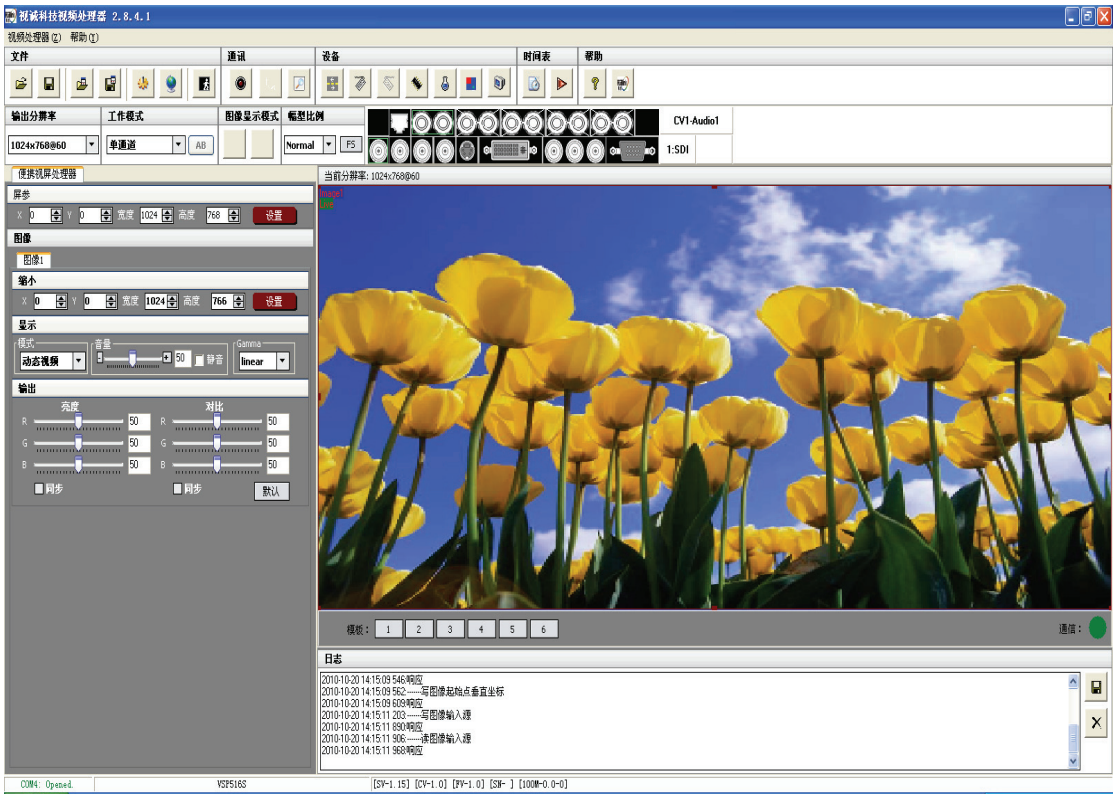


When the installation fininsh, can go to check the installed COM port inside the device mangement, as following picture show:

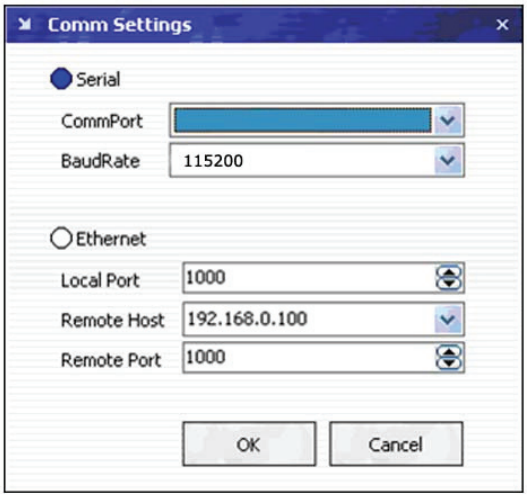

System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Drivers
Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.
Driver Signing
Windows Update
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles
OK
Cancel
Apply



2. Install the console software, and run after install, shows the interface of the console as following:



: Set the RS232 as installed just now, and set the VSP516S Boud Rate to be: 115200.



Press to start RS 232 communication, when there is green point in the right down corner showing on the software, it means the communication is OK, and you can use the software to control the device now; the software operation is the same as VSP516, just can see the difference of the SDI input;

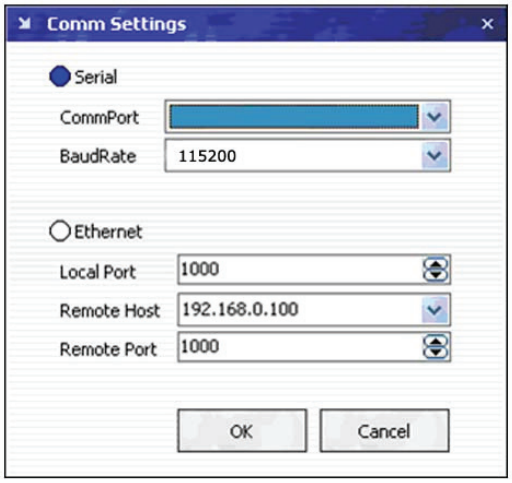
Note:	If power off during communication, should close the port by first, and plug in out of the USB and do communication again.

7.3 How to Use LINSN Ledset software?

1. First, Install AVDSP software and LINSN software.

2. Run AVDSP software;

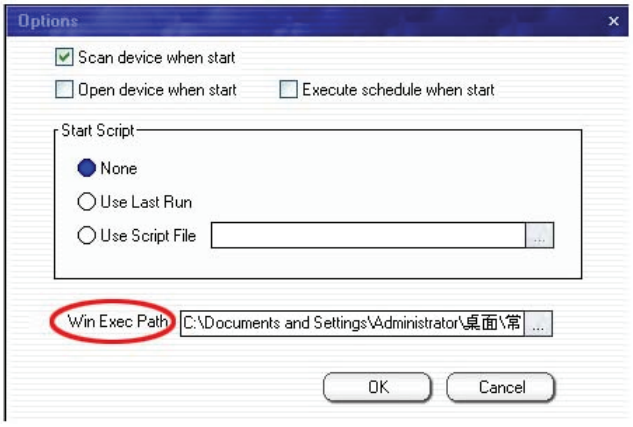
①Press to set the RS232. first choose the current RS232 you are using, then set the baud rate.

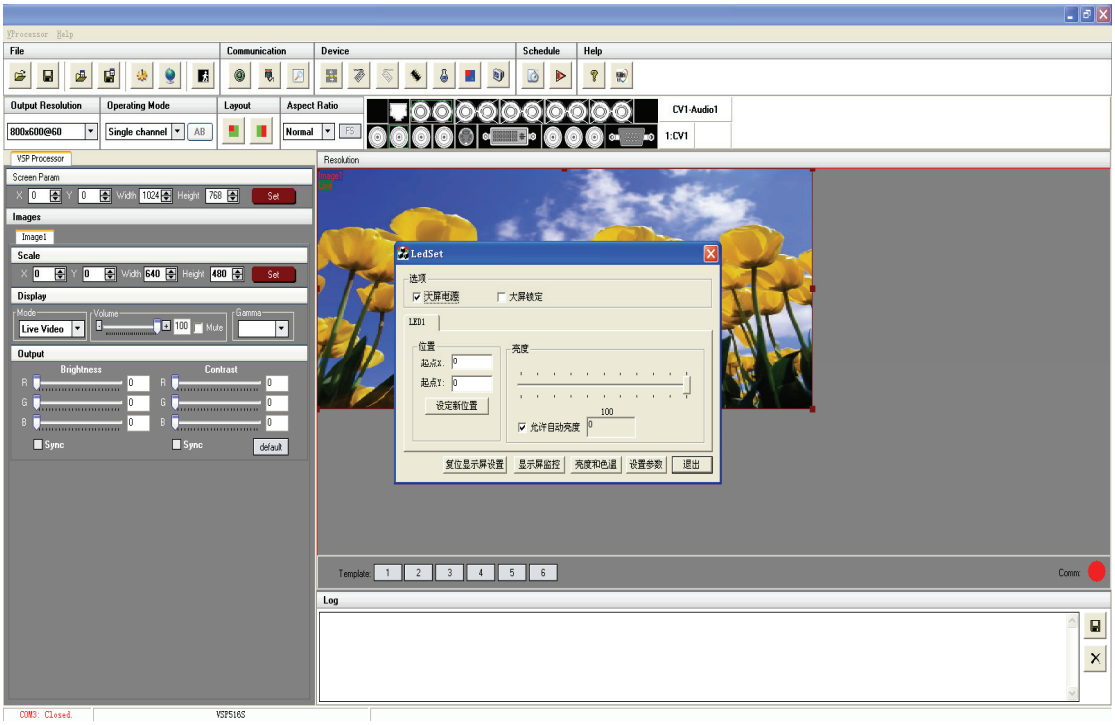


Note:	VSP516 and VSP516H Baud Rate work as 9600, while VSP516S Baud Rate work as 115200.

Press to start the RJ232, when the green point showing on the right down corner, it means the communication is successful.

Press :option. Find the LINSN software installation file LEDSET.EXE through "external progress route"as following picture:





As LINSN software will use RS232 for communication too, so user should first close AVDSP console software RS232 communication after that press ;

If in used , then to start the LINSN software. When you want to use AVDSP software, you just need to close LINSN software, start the RS232 again.

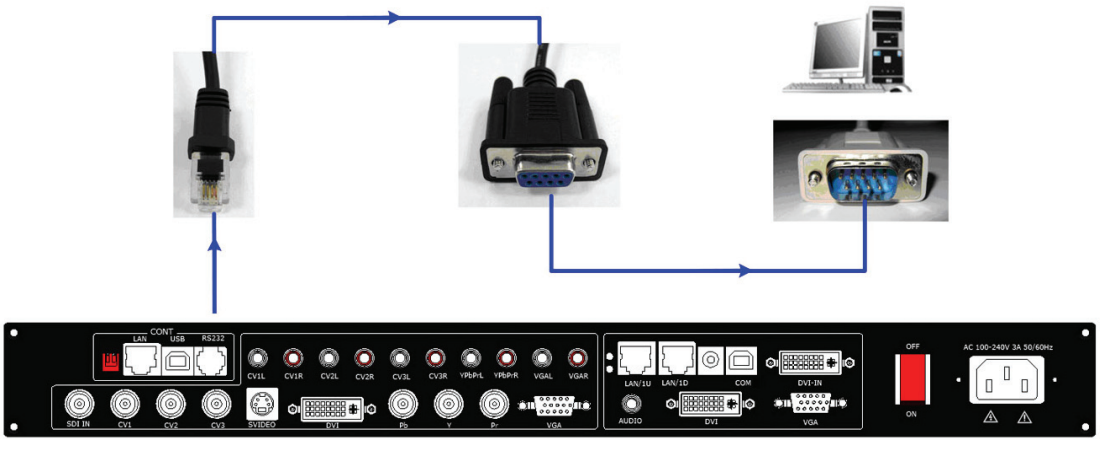
Note::	Before using AVDSP console software to execute the LINSN software, you should first internally connect the device's 100M board with sending card. Any question, please feel free to contact our customer service engineer.

8.0 Appendix

8.1 Appendix Ⅰ Download the IP software

Turn off the power, take the two coding switch to "ON" sate. As below:

Connect one side of the RJ11 download line to the RS232 on the video processor, and the other side to be connected to the serial port on the PC.

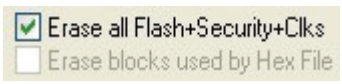


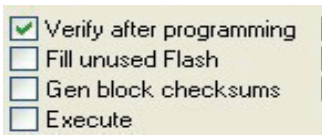
Double click

to run Flash Magic ,setting as below:

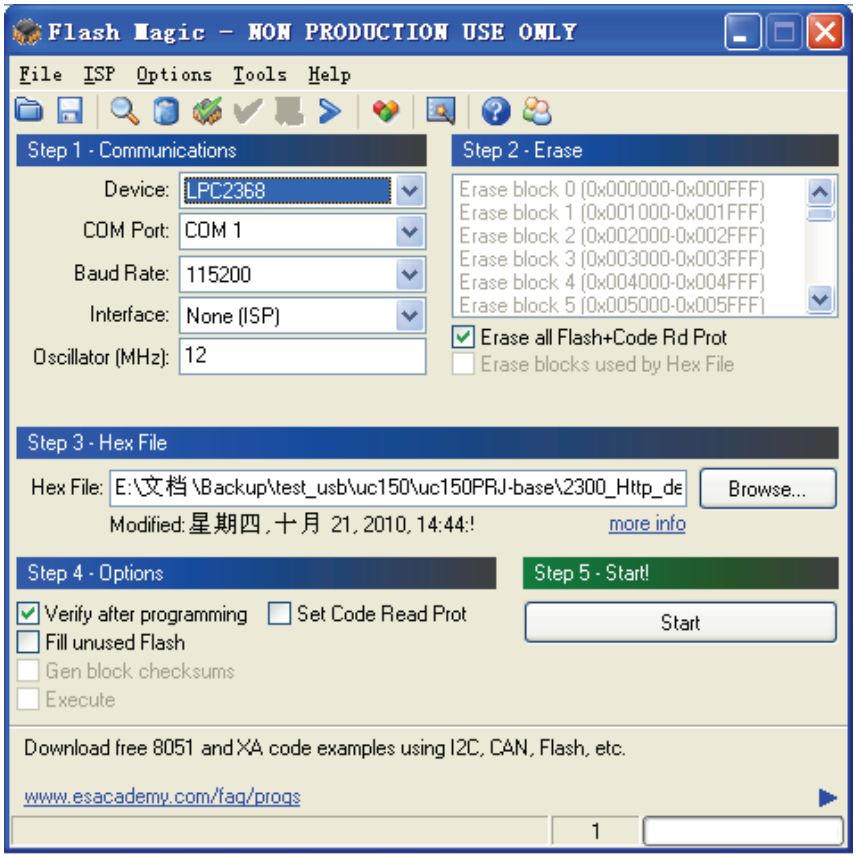
First, users can choose the right serial port, set the baud rate to 9600, choose LPC2368,and to load the aim document (hex.document) of IP board upgrading.

Secondly, confirm the two option box by tick.





Finally, click the “Start” button.



After download, exit the program, turn off the power, tack the two coding switch back, as below, restart the equipment power, check if the equipment work normally.

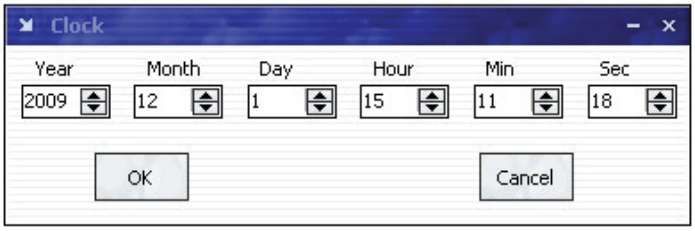
Note:	Flash Magic download website:
	http://rgblink.com/_d269872174.htm

8.2 Appendix Ⅱ How to add tasks.

Use "Device Schedule" can add tasks，make device automatically run to the Schedule input source in specified time or schedule display modes such as fade in and out.

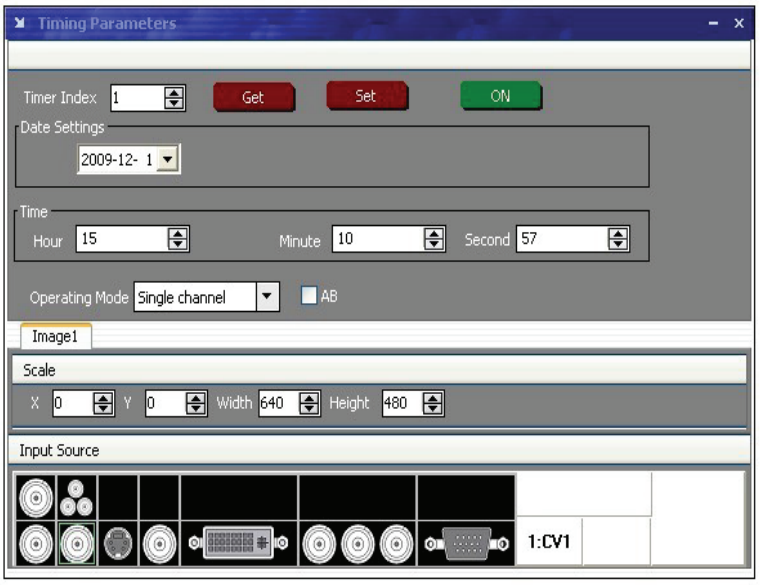
- First of all，set lower computer current time through host computer "clock".

Note：	Reset to factory settings after setting the clock will affect the time before.



After Clock setting, users can check whether successfully set through button. Press MENU button to enter system main menu, then press Dev Info (device information), then press SEL button can show device information. Touch /DOWN，check in the System time. Shown as below picture：

- After device clock set, add task plan through" Timing Parameters".



1. Users need to start "time-enabled" before using" timing device". If you forget to start, time set may fail.

Click "start" button

, when the button changes to

, it means time can start.

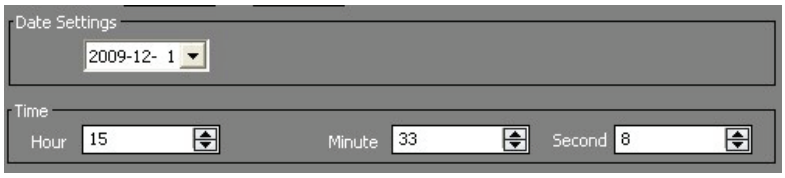
Press MENU button can enter system main menu, touch UP/DOWN to enter advanced menu, shown as the picture:

Press SEL button to enter advanced menu

2. When the timer count is set to 1, it indicates that the setting contents will be stored in the "timing 1". If you need to set more, you can set up one by one and saved in different "Timer index".

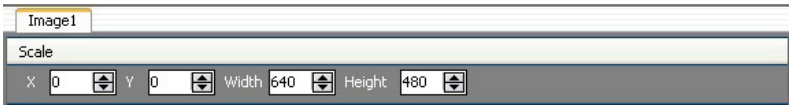
Note:	Equipment currently supports 10 task scheduler.

3. Set "task schedule" playing time，can up to second.



4. Select the signal source to play works in dual channel or single channel mode, and check whether to use fade during dual channel mode.

5. Users can control the image position and size by change the data or click the drop-down arrow.



6. When device works under the single channel mode, click the interface Icon.

Red box indicates current interface has been selected as the input interface;

When device works under the dual channel mode, need to switch image 1 and image 2 set input signal one by one.

Users can see the image 1 and image 2 input source information in the input

source toolbar after setting. Shown as the picture:

7. When you finished above step, click button

to finish adding" tasks plan".

Click button

, you can see the input source, playing time, image size, position etc. of the current "tasks plan"

Users can see all the "tasks plan" relevant content through "Timer index" switching

.